

Application Number 10/755,143

Amendment responsive to Office Action mailed April 19, 2007

### **REMARKS**

This Amendment is responsive to the Office Action dated April 19, 2007. Applicant has amended claims 1, 2 and 21. The amendments to claims 2 and 21 are for clarity purposes unrelated to patentability. Claims 1-12, 21, and 22 are pending. The Examiner withdrew claims 21 and 22 as being directed to a non-elected invention, but Applicant believes the withdrawal of claims 21 and 22 was improper, as outlined below.

### **Claim Rejection Under 35 U.S.C. § 102 and 35 U.S.C. § 103**

In the Office Action, the Examiner rejected claims 1, 3, 8-9 and 12 under 35 U.S.C. 102(b) as being anticipated by Schwarz (US 5,541,793). The Examiner also rejected claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Nute (US 5,862,014). The Examiner rejected claims 4-7 under 35 U.S.C. 103(a) as being unpatentable over Schwarz in view of Nagata (US 5,027,245), and rejected claims 10-11 under 35 U.S.C. 103(a) as being unpatentable over Schwarz in view of Nozieres (US 6,650,496).

Applicant has amended claim 1. Applicant respectfully traverses the rejections to the extent such rejections may be considered applicable to the amended claims.

Each of the primary references (Schwarz and Nute), cited by the Examiner, discloses magnetic head modules that include a plurality of write heads and a plurality of read heads. However, the write heads of the primary references are not arranged in a two-dimensional matrix, as set forth in Applicant's claims. The current amendments clarify the distinction between a two-dimensional matrix of write heads, as recited in Applicant's claims, and two linear arrays of write heads that read data as media moves in first and second directions, respectively, as taught by Schwarz and Nute.

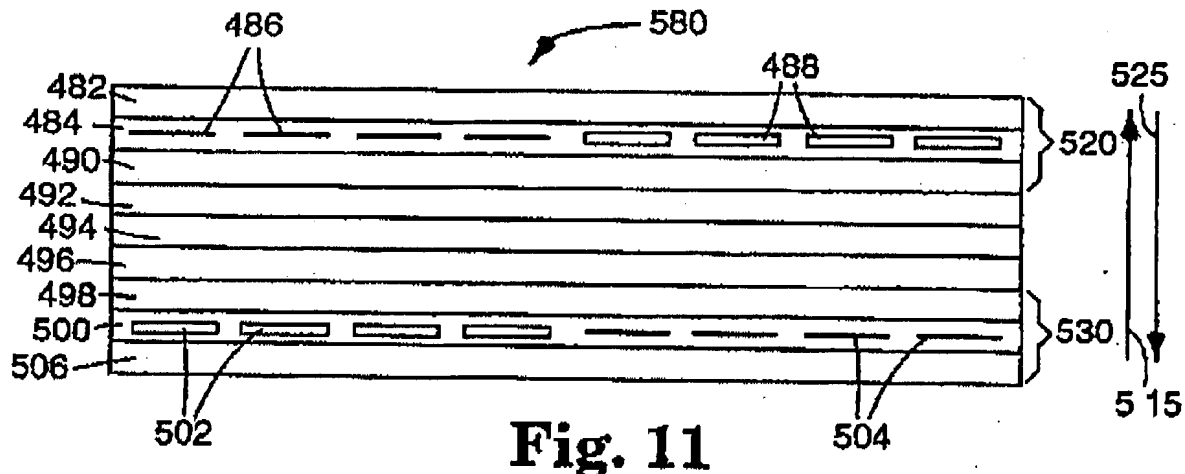
In Schwarz and Nute, write heads are arranged in a linear manner. Due to the fact that Schwarz and Nute support read-after-write applications in both directions, Schwarz and Nute include two different linear arrays of write heads that are formed in different layers of a head assembly. The first linear array of write heads writes data in one direction and the second linear array of write heads writes data in the opposite direction. Applicant has clarified the pending claims to require that the matrix array of write heads defines write channels for the system as the magnetic media moves in a direction of motion relative to the array of write heads. In this way,

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the claims better distinguish the claimed invention from systems like Schwarz and Nute that include two different linear arrays that write data when the magnetic media move in first and second directions, respectively.

FIG. 11 of Schwarz (relied upon by the Examiner) is reproduced below. As shown in FIG. 11 of Schwarz, write elements 488 are part of a first linear array of write heads that write data when the magnetic media moves in a first direction relative to head assembly 580. In addition, write elements 502 are part of a second linear array of write heads that write data when the magnetic media moves in a first direction relative to head assembly 580. Notably, it may be difficult or impossible to achieve the head spacing recited in dependent claims 4-7.



**Fig. 11**

In the Office Action, the Examiner interpreted the two different linear arrays of write heads of Schwarz (i.e., the different linear arrays associated with heads 488 and 502) as collectively forming a two-dimensional matrix, as required in claim 1. The Examiner made similar interpretations with respect to Nute, which, like Schwarz, defines a head assembly with two different linear arrays of read heads that read information in two different directions, respectively.

The current claim amendments now require that the two-dimensional matrix of write heads defines write channels in a common direction of motion of the media relative to the system. In particular, Applicant has clarified the pending claims to require that the matrix array of write heads defines write channels for the system as the magnetic media moves in a direction

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of motion relative to the array of write heads. In this way, claim 1 clearly distinguishes systems like Schwarz and Nute, which include two different linear arrays that write data when the magnetic media move in first and second directions, respectively.

Applicant has also clarified that each of the write heads in the two-dimensional matrix corresponds to one of the MR heads of the array of MR heads such that each of the write channels corresponds to one of the read channels as the magnetic media moves in the direction of motion. This further amendment also clarifies the distinction between a matrix array of write heads that define write channels in a common direction of media motion (as set forth by Applicant's claims) and two different linear arrays of write heads that define write channels in two different directions of media motion, as shown in Schwarz and Nute.

In view of the current claim amendments, all pending claims should now clearly distinguish the applied prior art. Accordingly, reconsideration and allowance of all pending claims is courteously solicited.

Applicant does not acquiesce to any of the Examiner's rejections of the dependent claims. Claims 4-7, for example, recite channel head spacing that would have been difficult or impossible to achieve in linear arrays, such as systems like those of Schwarz and Nute. Nevertheless, Applicant reserves further comment at this time on the dependent claims since the amendment to independent claim 1, addressed above, should overcome all pending rejections.

#### **Election of Species**

In the Office Action, the Examiner refused to examine dependent claims 21 and 22, and stated that these claims are directed to a non-elected invention. Applicant disagrees, and respectfully submits that the Examiner should examine these claims or address the comments below, which were also presented in the previous response.

The Examiner had previously advanced an Election of Species Requirement, indicating that FIGS. 2, 6 and 8 illustrate patentably distinct species. In response to the Election of Species Requirement, Applicant explained that FIG. 2 (claim 1) is generic relative to FIG. 6 (former claim 13) and FIG. 8 (former claim 18). Applicant agreed with the Examiner that FIG. 6 (former claim 13) and FIG. 8 (former claim 18) are species of a common genus shown in FIG. 2 (claim

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1). On this basis, Applicant elected the genus shown in FIG. 2 (claim 1), and further elected the species shown in FIG. 6 (claim 13) over the species shown in FIG. 8 (claim 18).

Current dependent claim 21 is similar to former claim 13, but depends upon claim 1.

Current dependent claim 22 depends upon claim 21.

Applicant respectively notes that while the presence of a generic claim is not, by itself, a basis for obviating an election of species, the fact that claim 1 is generic relative to claim 21 precludes these claims from being different species of a common genus. Therefore, any need to elect between claim 1 and 21 (or claim 1 and former claim 13) was improper. The genus is defined by claim 1, and claim 21 defines a species within this common genus of claim 1. Therefore, claims 1 and 21 should be examined together, consistent with Applicant's election of the genus of FIG. 2 and the species of FIG. 6.

In other words, the Examiner's previous statement that the presence of a generic claim is not a basis for obviating an election of species applies only with respect to election between the species formerly defined by claims 13 and 18. In this case, the presence of generic claim 1 is not a basis for obviating an election of species between claims 13 and 18. However, Applicant elected claim 13 over claim 18. The fact that claim 1 is generic with respect to claims 13 and 18 precludes the Examiner from withdrawing examination of the subject matter of both claims 13 and 18. The Examiner should have examined claim 13 in the previous Office Action, and should examine claims 21 and 22 in the next Office Action.

With respect to the Examiner's previous statement that Applicant's disclosure indicates that the structure of FIG. 2 is considered a distinct species, Applicant disagrees, and submits that the Examiner has provided no basis for this assertion. Again, claim 1 defines a genus, and claims 13 and 18 were species of the common genus of claim 1. Applicant is entitled to examination of the genus defined in claim 1 and at least one of the species of that genus, e.g., the species formerly defined in claim 13 and currently recited in claim 21. Nothing in Applicant's disclosure states that the structure of FIG. 2 is considered a distinct species relative to the structure of FIG. 6.

In short, the Examiner cannot, as a matter of law, assert that independent claim 1 and dependent claim 21 (which depends upon claim 1) are species of a common genus. On the

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contrary, claim 1 is clearly generic with respect to claim 21, and there are no other alternative species to claim 21 that are currently pending.

In view of these comments and observations, examination of claims 21 and 22 is courteously requested.

Nothing in the applied prior art discloses or suggests the system defined by claim 21. In particular, nothing in the applied prior art discloses or suggests a system comprising a first array of write heads arranged in a two-dimensional matrix that define write channels for the system in a first tape direction, a second array of write heads arranged in another two-dimensional matrix, wherein the write heads in the second array of write heads define write channels for the system in a second tape direction, and an array of MR heads positioned between the first and second arrays of write heads, wherein the MR heads define read channels for the system in both the first and second tape directions. For at least this reason, and other reasons, dependent claim 22 should also be allowed.

#### CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 09-0069. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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7/19/07

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